(19) World Intellectual Property **Organization**

International Bureau





(43) International Publication Date 6 May 2005 (06.05.2005)

(10) International Publication Number WO 2005/040427 A2

(51) International Patent Classification7:

C12Q 1/68

(21) International Application Number:

PCT/US2004/030699

(22) International Filing Date:

17 September 2004 (17.09.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/504,307

19 September 2003 (19.09.2003) US

- (71) Applicant (for all designated States except US): DECODE GENETICS EHF. [IS/IS]; Sturlugotu 8, 101 Reykjavik (IS).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BJORNSDOTTIR, Soley [IS/IS]; Fannafold 137, 112 Grafarvogur (IS). KONG, Augustine [-/US]; 5527 University Avenue, Apt. 4W, Chicago, IL 60637 (US). THORGEIRSSON, Thorgeir, E. [IS/IS]; Bauganes 35, 107 Reykjavik (IS).
- (74) Agents: CARROLL, Alice, O. et al.; Hamilton, Brook, Smith & Reynolds, P.C., 530 Virginia Road, P.O. Box 9133, Concord, MA 01742-9133 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: INVERSION ON CHROMOSOME 8P23 IS A RISK FACTOR FOR ANXIETY DISORDERS, DEPRESSION AND **BIPOLAR**

(57) Abstract: An association between psychiatric disorders and disorders comorbid with psychiatric disorders, and genetic markers in the 8p23 genomic region is described. Markers are also provided to diagnose or detect a susceptibility to disorders comorbid with panic disorder and independently of comorbidity with panic disorder. Methods and surrogate markers for detecting the orientation of the Inv8p23 inversion fragment, thereby diagnosing psychiatric disorders or comorbid disorders or a susceptibility to psychiatric disorders or comorbid disorders, are also disclosed. The methods described herein are also useful for determining responsiveness of drugs useful for treating psychiatric disorders.

